

NOVEMBER/DECEMBER 2023

CBC41 — PLANT BIOCHEMISTRY

Time : Three hours

Maximum : 75 marks



SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define calvin cycle.
2. Explain the importance of chloroplast.
3. What are phytochemicals?
4. Outline the types of auxins.
5. List the names of nodule forming bacteria.
6. Explain the role of Nitrate reductase.
7. How does stresses affect plants?
8. Outline the effects of mycotoxins.
9. Show the sources of ROS on plants.
10. Summarize the importance of catalase.

SECTION B — (5 × 5 = 25 marks)

Answer ALL the questions.

11. (a) Identify the components of chloroplast.

Or

- (b) Analyse the importance of Z scheme.

12. (a) Organize the functions of gibberellins.

Or

- (b) Examine the importance of auxin in plants.

13. (a) Organize the steps involved incorporation of ammonia in to plants.

Or

- (b) Analyze the events in nitrogen cycle.

14. (a) Organize the effects of salinity on plants.

Or

- (b) Examine the role of phytohemagglutinins briefly.

15. (a) Identify the effects of ROS in plants.

Or

- (b) Analyze the role of Vitamin C and E in neutralizing oxidants.



SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain photorespiration in detail.

17. Deduce the importance of Auxins with their structure.

18. Explain the steps involved in nitrogen fixation.

19. Elaborate the stress due to heavy metals in plants.

20. Discuss about enzymatic antioxidants. How do they help in neutralizing free radicals?